

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

|1. (original) Method for enhancing the measuring accuracy in an antenna array (1) comprising a number of antenna elements (2), where the method comprises the steps of;

- receiving analog signals with the antenna array (1) elements, and;
- producing values for a radiation diagram from the signals,

characterized in that the method comprises the steps of;

- a) -receiving analog signals on all antenna elements (2) at a first time  $t_1$ ;
- producing first values for a first radiation diagram from the values in the signals from the first time  $t_1$ , and;
- finding the maximum point (8) for the first values,
- b) - switching off or reducing the signal from one interadjacent antenna element (2) at a second time ( $t_2$ );
- receiving analog signals on all antenna elements (2) except from the one switched off or reduced antenna element, and;
- producing second values for a second radiation diagram from the values in the signals from the second time ( $t_2$ );
- c)-using the first values to calculate a first range (9) referring to the second radiation diagram, outside which the first range (9) grating lobes (7) will appear in the second radiation diagram;
- rejecting all values outside the first range (9), and;

-finding the maximum point (8) for the second values.

2. (original) Method according to claim 1, characterized in that step b) and step c) is repeated such that the antenna configuration dynamically is altered such that interadjacent antenna elements 2 are switched off or reduced until only the outermost antenna elements 2 remain.

3. (currently amended) Method according to claim 1-~~or 2~~, characterized in that the step of finding the maximum point (8) for the values refers to calculating at which angle ( $\theta_{\max}$ ) the maximum point (8) for the main lobe (6) appears in a radiation diagram.

4. (currently amended) Method according to ~~any one of the previous claims~~ claim 1, characterized in that method comprises the step of converting the analog signals to digital signals by sampling.

5. (currently amended) Method according to ~~any one of the previous claims~~ claim 1, characterized in that the method comprises the step of producing a radiation diagram from the values.

6. (currently amended) Method according to ~~any one of the previous claims~~ claim 1, characterized in that the antenna elements (2) have a relative distance such that no grating lobes (7) will occur when using all elements in a full array.

7. (original) Antenna array (1) system (23) comprising means for enhancing the measuring accuracy in an antenna array (1) comprising a number of antenna elements (2), where the antenna array (1) system (23) comprises;

- means (13) for receiving analog signals with the antenna array (1) elements, and;

-means (14) for producing values for a radiation diagram from the signals,

characterized in that antenna array (1) comprises;

a) –means (13) for receiving analog signals on all antenna elements (2) at a first time (t<sub>1</sub>);

- means (14) for producing first values for a first radiation diagram from the values in the signals from the first time (t<sub>1</sub>), and;

-means (15) for finding the maximum point (8) for the first values,

b) – means (16) for switching off or reducing the signal from one interadjacent antenna element (2) at a second time (t<sub>2</sub>);

-means (13) for receiving analog signals on all antenna elements (2) except from the one switched off or reduced antenna element, and;

- means (14) for producing second values for a second radiation diagram from the values in the signals from the second time (t<sub>2</sub>);

c)-means (17) for using the first values to calculate a first range (9) referring to the second radiation diagram, outside which first range (9) grating lobes (7) will appear in the second radiation diagram;

-means (18) for rejecting all values outside the first range (9), and;

-means (15) for finding the maximum point (8) for the second values.

8. (original) Antenna array (1) system (23) according to claim 7, characterized in that the system comprises means (19) for repeating step b) and step c) such that the antenna configuration dynamically is altered such that interadjacent antenna elements (2) are switched off or reduced until only the outermost antenna elements (2) remain.

9. (currently amended) Antenna array (1) system (23) according to claim 7 or 8, characterized in that the means (15) for finding the maximum point (8) for the values comprises means for calculating at what angle ( $\theta_{\max}$ ) the maximum point (8) for the main lobe (6) appears in a radiation diagram.

10. (currently amended) Antenna array (1) system (23) according to ~~any one of claims 7-9~~ claim 7, characterized in that the system comprises means (21) for converting the analog signals to digital signals by sampling.

11. (currently amended) Antenna array (1) system (23) according to ~~any one of claims 7-10~~ claim 7, characterized in that the system comprises means (22) for producing a radiation diagram from the values.

12. (currently amended) Antenna array (1) system (23) according to ~~any one of claims 7-10~~ claim 7, characterized in that the antenna elements (2) have a relative distance (3) such that no grating lobes (7) will occur when using all elements in a full array.